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ABSTRACT

This research project attempted to (1) identify leader types from teacher descriptions of the leadership behaviors of elementary school principals and (2) study the effects of the leadership types on the organizational behavior of teachers. Teacher responses from 99 Iowa elementary schools revealed three basic principal leadership types. Using both the Q-sort and analysis of variance techniques, factor analysis of the item description pattern for each type suggested the following labels: Type I--Tolerant-Integrator; Type II--Intolerant-Structuralist; and Type III--Tolerant-Interloper. Under Type I principals, teacher behaviors of disengagement and hindrance were lower, esprit was higher, and congruence between teachers and principals was greater. Principal type was found to be unrelated to both school staff size and organizational intimacy. (RA)

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TYPES OF ELEMENTARY SCHOOL PRINCIPAL-LEADERS
A Q-FACTOR ANALYSIS*

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INTRODUCTION

Quite frequently in the early stages of a field of study typologies are developed to serve as "heuristic" devices. The number of typologies developed for studies on leadership are vast. Bass (1960) lists nineteen typologies utilized in studies of leadership. Sargent and Williamson (1966) cite eleven types and levels of leadership. Lippitt and White (1952) conducted a controlled experiment in which boys' clubs were subjected to treatments by several types of leadership styles: namely, autocratic, democratic, and laissez-faire. Getzels and Guba (1957) describe three types of leaders deducted from their model of behavior in a social system: nomothetic, idiographic, and transactional leaders.

Numerous studies have been conducted to study leadership behavior in small groups under experimental laboratory conditions. However, a major problem in applying experimental techniques to school situations is the inability of the experimentor to assign and control treatment conditions. A second problem centers on the appropriateness of research findings in small group situations applied to complex hierarchical organizations. In view of these problems it was felt that an exploratory study describing types of leaders in a complex hierarchical setting generated from empirical data might contribute to the development of leadership theory within an educational setting.

EA 003 515

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It was the purpose of this study to identify types of leaders using empirical data describing the leadership behavior of elementary school principals and subsequently study the effects of various types of leaders on selected dimensions of organizational behavior of teachers. It was expected that the findings would demonstrate the cruciality of the principal's leadership behavior in influencing the behavior of teachers within the school setting.

STATEMENT OF THE PROBLEM

The basic problem to be studies was: What are the relationships between types of principal-leaders and selected aspects of the organizational behavior of teachers, size of staff, and congruence of perceived leader behavior (between principal and teachers) in large district Iowa elementary schools?

The problem thus had embedded in it two major subproblems: namely,

Subproblem One: What types of principal-leaders exist in large district Iowa elementary schools?

Subproblem Two: What are the relationships between types of principal-leaders and selected aspects of the organizational behavior of teachers, size of staff, and congruence of perceived leader behavior between principal and teachers?

The selected aspects of the organizational behavior of teachers used in this study were the four teacher subtests from Halpin's Organizational Climate Description Questionnaire (OCDQ): (a) Disengagement, (b) Hindrance, (c) Esprit, and (d) Intimacy.

There were three specific research questions that emanated from subproblem one stated above:

1. How many types exist?

2. What are the descriptions of each type of principal-leader?

3. How do the leader types differ from one another?

There were six specific research questions that emanated from subproblem two stated above:

1-4. Is there a difference between the disengagement (hindrance-esprit-intimacy) behavior of teachers under different types of principal-leaders?

5. Is there a difference between the size of staff under different types of principal-leaders?

6. Is there a difference between the congruence of perceived leader behavior, between principal and teachers, under different types of principal-leaders?

METHODOLOGY

The Instruments

The instruments used in this study were Stogdill's (1963) LBDQ-XII (Leader Behavior Description Questionnaire-Form XII) and Halpin's (1966) OCDQ (Organizational Climate Description Questionnaire).

In the original form of the LBDQ-XII the general frame of reference employed in the instrument is "group-supervisor." Accordingly, the LBDQ-XII was adapted for the elementary school setting by changing "group" to "faculty or teachers," and "supervisor" to "principal" wherever they appeared in the LBDQ-XII items.

Since the LBDQ-XII was to be utilized with both teachers and principal from each school in the sample, a parallel form was adapted for principals. This involved changing the "person" of each item so that a "self-description" could be obtained.

In the original LBDQ-XII subjects are requested to select the response which best describes the frequency of behavior contained in the item with respect to the leader being described. This five-point scale is: (a) Always, (b) Often, (c) Occasionally, (d) Seldom, (e) Never. It was felt that the "Always" and "Never" categories might not be operative with a group of individuals who have had considerable exposure to testing instruments. Accordingly, the "Always" and "Never" categories were changed to "Very Frequently" and "Very Rarely."

Determination of Population

The present study was an investigation since "types of principal-leaders" were non-assignable treatments and the effects of the "types" were already present in the real population. The application of a simple-randomized design to "investigational" studies presents no unique problems with respect to the computational procedures. However, Lindquist (1953, p. 101) notes, "...the interpretation of the results is usually more difficult in an observational study of effects already present than in a controlled experiment. As already implied, this is primarily due to the lack of positive control over extraneous factors."

This study was delimited to large district Iowa elementary schools with a staff size of eight or more, in which the principal and teachers served for a minimum of one year prior to this study, in part, to provide some control over extraneous factors. A second reason for the delimitations was the nature of the instruments and the assumption that in order to provide accurate descriptions of "others" behaviors, an appropriate time interval was necessary.

The population of interest was determined by listing all of those elementary schools in the largest twenty districts which met the criteria for inclusion. The total number of elementary schools was 318 of which 228 met the criteria for inclusion.

Selection of the Samples

The 228 elementary schools were each assigned a unique number, and a table of random numbers was employed to randomly sample out 78 schools; the remaining 150 schools, therefore, became the sample for this study.

Inspection of the size of staff of sampled schools revealed a range of from eight to thirty staff members.

Halpin (From Stogdill, 1963, p. 12) suggested in using the LBDQ that "... a minimum of four respondents per leader is desirable, and additional respondents beyond ten do not increase significantly the stability of index scores. Six or seven respondents per leader would be a good standard." In view of Halpin's statement, the investigator decided to send out a minimum of eight, up to a maximum of twelve, teacher instruments per school sampled. This decision therefore required a random selection for those schools which had staff sizes greater than twelve.

Of the 150 sample schools, 37 requested exclusion from the study which reduced the sample size to 113 schools.

In order to include an elementary school in the analysis, four or more usable teacher returns had to be received. Following this criterion, ninety-nine of one hundred and thirteen schools qualified for inclusion in the data analysis. Thus, eighty-eight percent of schools receiving instruments were included in the data analysis. The average number of usable teacher returns was slightly over seven per school. (The Appendix provides a breakdown of returns by district.)

Treatment of the Data

For each school the following scores were computed:

1. The mean for each LBDQ-XII item based upon teacher instruments
2. The OCDQ subtests based upon teacher instruments
3. A Congruence index

The congruence index was generated by performing a profile analysis of LBDQ-XII subscale scores between principal and teachers for each school. The formula employed (Nunnally, 1967, p. 377) was:

$$C = \sqrt{\sum_{i=1}^{12} (X_i - Y_i)^2}$$

where

C = Congruence index

X = Principal's LBDQ-XII subscale score

Y = Teachers' LBDQ-XII subscale score

i = LBDQ-XII subscales

Q-Analysis

The LBDQ-XII item scores were subjected to a Q-analysis in the following manner:

1. The Pearson product-moment correlation matrix was produced by correlating each variable's (Principal's) items with every other variable's (Principal's) items.
2. The correlation matrix was evaluated for principal components factors.
3. The obtained factors were rotated utilizing the Varimax procedure.
4. The rotated factor matrix was reordered, classifying each variable according to its highest factor loading.
5. Each variable was assigned a weight by utilizing the following formula:

$$W = \frac{r}{1-r^2}$$

where

W = weight

r = highest factor loading

6. Each pattern of response items associated with each factor was estimated. This was done by:
   a. Weighting each item response of each of the variables most highly associated with a given factor.
   b. Summing the weighted responses across each item for each factor.
   c. Standardizing and converting to z-scores the weighted item arrays for each factor.
7. The z-scores were then used to compare and differentiate factor descriptions.
8. A z-score difference of 1.0 was assumed to differentiate between response patterns of factors.

Groups-Within-Treatments (ANOVA)

Since unweighted means of a simple random sample of group means were the scores analyzed, the Groups-Within-Treatments design was equivalent to a simple randomized ANOVA design.

After the "types of principal-leaders" were identified, they were considered to be non-assignable treatments.

Prior to the analysis of the data, three decisions regarding statistical procedures were made:

1. It was decided to establish an alpha level of .05 for rejection of the null hypotheses.
2. If the null hypothesis was rejected, subsequent multiple comparisons of differences between means would be done following the Scheffé method at the .05 alpha level.
3. The F_{MAX} test for homogeneity of variance would be employed also at the .05 alpha level.

FINDINGS

Q-Analysis

Types of Principal-Leaders

The results of the initial factor analysis produced ten factors which accounted for 81.15 percent of the total variance (See Table 1). An inspection of the unrotated factor matrix revealed that after the third factor only one variable had its highest factor loading on factors four through ten. The maximum number of factors to be extracted was set at three and the subsequent analysis produced a three factor solution. The Appendix contains the table of the rotated factor matrix for this solution. Subsequent computational procedures identified sixty-eight TYPE ONE, twenty-one TYPE TWO, and ten TYPE THREE principal-leaders.

In the typical Q-sort technique, subjects sort a deck of cards containing items into a predetermined number of response categories - each consisting of a specified number of items.

Application of this procedure results in distributions of items which have equal variances and uniform means for all persons sorting the items. Subsequent analysis and description of "types" of persons are based on scores which have uniform level (means) and uniform dispersion (variance). In the present investigation, however, the subjects responding to each LBDQ-XII questionnaire were not required to sort a predetermined number of items into each of the five response categories.

In the subsequent factor analysis and determination of "types" of principal-leaders and description of each "type" there was no guarantee that each of the identified "types" would have the same level (mean), and dispersion (variance) with respect to the items which described each "type" of leader.

An analysis of the items' mean and variance for those classified in each "type" was conducted in order to reveal whether or not level and dispersion differed from

"type" to "type." Table 2 contains the results of this analysis. Inspection of the table reveals that uniform means and variances do not exist between "types." Type One's items' mean was the highest and Type Three's, the lowest. This reveals that in terms of the original response scale ([5] Very Frequently Occurs through [1] Very Rarely Occurs), Type Ones were described as more frequently exhibiting the behaviors contained in the items more so than any other Type. Type Threes were described as less frequently exhibiting the behaviors contained in the items. Inspection of the variances for Types reveals that Type Three's distribution of item scores was more dispersed than the other Types and Type Two's distribution was less dispersed than the other Types.

Following the identification of three "types" of principal-leaders, whose teachers' descriptions of LBDQ-XII items were similar, an item pattern for each of the three Types was estimated by weighting the principals most highly associated with each factor. The higher a principal's loading on the factor, the greater the weight. These weights were applied to each item response and the weighted item scores were then summed across principals on each factor. This produced an item array of weighted item scores for each of the three factors on "principal-types." The three arrays of weighted item scores were then converted to z-scores where the highest z-score represents the item describing the most frequently occurring behavior exhibited by each principal-type. The arrays of item z-scores for each of the three "types" may be found in the Appendix.

Since the item scores for principals were used in obtaining the z-score arrays, the differences in means and variances between "types" were embedded in the estimating procedure. The subsequent ipsative standardization within each "type" resulted in a set of z-scores which represents the ranking of each item within each "type's" range of behaviors.

In all subsequent descriptions of each "type," and comparisons between "types," the frame of reference employed is the rank order position of each item within the range of behaviors for each "type."

Analysis of the items description pattern for each Type and subsequent comparisons between Types suggested the following labels:

Type One : Tolerant-Integrator

Type Two : Intolerant-Structuralist

Type Three: Tolerant-Interloper

A summary description of each Type follows:

Type One: Tolerant-Integrator - In general, this type was described as more frequently exhibiting Consideration, Tolerance of Freedom and Reconciliation behaviors, and less frequently exhibiting Production Emphasis behaviors. He tended not to engage in "pep" talks to stimulate faculty members.

Type One was distinguished from other Types in that he more frequently exhibited, within his ranking of behaviors (as compared to other Types within their ranking of behaviors) Consideration behaviors. He tended to treat teachers as his equals and maintains a closely knit faculty.

Type One, within his ranking of behaviors (in comparison to all other Types within their rankings of behaviors) less frequently exhibited Production Emphasis and Initiating Structure behaviors. He tended not to establish uniform procedure or to assign teachers to particular tasks.

Individual comparisons of Type One's ranking of behaviors, within his pattern of behaviors, with Type Two and Type Three, within their rankings of behaviors, indicated that: (A) Type One exhibited more Tolerance of Uncertainty and Freedom and more Consideration behaviors and less Production Emphasis, Initiating Structure, Representation and Superior Orientation behaviors than Type Two, (B) Type One exhibited more Role Assumption, Integration, Persuasion, and Reconciliation behaviors and less Superior Orientation, Production Emphasis, Tolerance of Freedom,

Representation, and Initiating Structure behaviors than Type Three.

Type Two: Intolerant-Structuralist - In general, this type was described as more frequently exhibiting Initiating Structure, Role Assumption, Representation, Superior Orientation, and certain Production Emphasis behaviors. He less frequently exhibited Tolerance of Uncertainty, Consideration, Integration, and certain Production Emphasis behaviors.

Type Two, within his ranking of behavior, was distinguished from other Types, within their rankings of behaviors, in that he more frequently exhibited Initiating Structure, Role Assumption, and Production Emphasis behaviors, and less frequently exhibited Tolerance of Uncertainty, Tolerance of Freedom, and Consideration behaviors.

Individual comparisons of Type Two's ranking of behaviors, within his pattern of behaviors, with Type One and Type Three, within their rankings of behaviors, indicated that: (A) Type Two exhibited more Production Emphasis, Initiating Structure, Representation, and Superior Orientation behaviors and less Tolerance of Uncertainty, Tolerance of Freedom, Consideration, and Reconciliation behaviors than Type One; and (B) Type Two exhibited more Role Assumption, Initiating Structure, Reconciliation, and Persuasion, and less Tolerance of Freedom, Tolerance of Uncertainty, Consideration, and Superior Orientation behaviors than Type Three.

Type Three: Tolerant-Interloper - In general, this type was described as more frequently exhibiting Tolerance of Freedom, Consideration, Superior Orientation, and Representation behaviors and less frequently exhibiting Production Emphasis, Role Assumption, Integration, Persuasion, and Reconciliation behaviors.

Type Three, within his ranking of behaviors, was distinguished from other Types, within their ranking of behaviors, in that he more frequently exhibited Tolerance of Freedom, Tolerance of Uncertainty, Superior Orientations, Consideration, and Production Emphasis behaviors, and less frequently exhibited Role Assumptions, Initiating Structure, Persuasion, and Reconciliation behaviors.

Individual comparisons of Type Three's ranking of behaviors, within his pattern of behaviors, with Type One and Type Two, within their rankings of behaviors, indicated that:

(A) Type Three exhibited more Superior Orientation, Production Emphasis, Tolerance of Freedom, Representation and Initiating Structure behaviors, and less Role Assumption, Integration, Persuasion, and Reconciliation behaviors than Type One; (B) Type Three exhibited more Tolerance of Freedom, Tolerance of Uncertainty, Consideration, and Superior Orientation behaviors and less Role Assumption, Initiating Structure, Reconciliation, and Persuasion behaviors than Type Two.

Groups-Within-Treatments (ANOVA)

The second subproblem was investigated by performing an analysis of variance of six selected variables (Disengagement, Hindrance, Esprit, Intimacy, Size of Staff, and Congruence) considering each Type of Principal-leader as a non-assignable treatment. It was deemed necessary to restrict the analysis to principal-leaders who were highly representative of each type. The index used to determine representativeness was the proportion of communality accounted for by the factor loading of each classified type. A value of .67 or more was assumed to indicate relatively high representativeness or purity of each principal-leader. Using this criteria, fifty-one Type One, twelve Type Two, and seven Type Three principal-leaders were included in the analyses.

Six null hypotheses of no differences between the means for the variables of Disengagement, Hindrance, Esprit, Intimacy, Size of Staff, and Congruence under different Types of principal-leaders were tested.

The results of each test were as follows:

Disengagement - The null hypothesis of no difference between the means of "disengagement" under Types of principal-leaders was rejected. Subsequent pair-wise mean comparisons indicated that "disengagement" behavior by teachers was significantly lower under Type One principal-leaders when compared with Type Three, but there were no significant differences in "disengagement" behavior between Type One and Type Two or Type Two and Type Three.

Hindrance - The null hypothesis of no difference between the means of "hindrance" under Types of principal leaders were rejected. Subsequent pairwise mean comparisons indicated that "hindrance" under Type One principal-leaders was significantly lower than "hindrance" under Type Two and Type Three principal-leaders, but there was no significant difference in "hindrance" between Type Two and Type Three principal-leaders.

Esprit - The null hypothesis of no difference between the means of "esprit" under Types of principal-leaders was rejected. Subsequent pairwise mean comparisons indicated that "esprit" under Type One principal-leaders was significantly higher than "esprit" under Type Three and Type Two principal-leaders, but there was no significant difference in "esprit" between Type Three and Type Two principal-leaders.

Intimacy - The null hypothesis of no difference between the means of "intimacy" under Types of principal-leaders was rejected. Subsequent pairwise mean comparisons failed to find significant differences between Types. However, there was an observable difference between mean scores with the greatest difference existing between Type Three (Highest) and Type Two (Lowest).

Size of Staff - The null hypothesis of no difference between the means of "size of staff" under Types of principal-leaders was retained. No further comparisons were done.

Congruence - The null hypothesis of no difference between the means of "congruence" of perceived leader behavior, between principal and teachers, and under Types of principal-leaders was rejected. Subsequent pairwise comparisons indicated that "congruence" scores under Type One principal-leaders was significantly smaller (indicating greater agreement) than "congruence" scores under Types Two and Three principal-leaders, but there was no significant difference between Types Two and Three.

CONCLUSIONS

On the basis of the findings of this investigation the following conclusions are made:

1. Three major types of principal-leaders exist in large district Iowa elementary schools. Type One (Tolerant-Integrator) accounts for approximately sixty-nine percent of the principals and is described as exhibiting considerate and tolerant behaviors. Type Two (Intolerant-Structuralist) accounts for approximately twenty-one percent of the principals and is described as exhibiting "bureaucratic" behaviors. Type Three (Tolerant-Interloper) accounts for approximately ten percent of the principals and is described as permitting teachers complete freedom and not assuming the role of leader.

2. Types of principal-leaders vary in their potency of leader behavior with Types One and Two about equally potent. However, Type Three appears to be less potent than either of the other two.

3. The "disengagement" behavior of teachers differs under Types of principal-leaders. Teachers' behavior in a task-oriented situation is significantly less "disengaged" under Type One principal-leaders when compared to Type Three principal-leaders. There are no significant differences in "disengagement" behaviors of teachers' between Types One and Two or Types Two and Three.

4. The "hindrance" behavior of teachers differs under Types of principal-leaders. Teachers' feeling that the principal burdens them with unnecessary "busywork" is significantly lower under Type One principal-leaders than under Type Two or Three principal-leaders.

5. The "esprit" behavior of teachers under Type One principal-leaders is significantly higher than "esprit" under Type Two and Type Three principal-leaders.

6. There is an observable difference in the "intimacy" scores under Types of principal-leaders with the greatest difference existing between Type Three (highest

intimacy score) and Type Two (lowest intimacy score).

7. There is no significant difference in the "size of staff" under Types of principal-leaders.

8. The congruence (agreement between principal and teachers in describing the principal's leader behavior) is significantly greater under Type One principal-leaders than under Types Two or Three principal-leaders.

Implications and Speculations

Upon studying the descriptions of each Type of principal-leader, it seemed as though three underlying dimensions accounted for the major differences between Types. Each Type seemed to vary in "potency" of behaviors, amount of "freedom-giving" behaviors, and amount of "order-maintaining" behaviors.

Potency of Behaviors

Types One and Two were both described as relatively "potent" in that the magnitude of their leader behaviors, irrespective of the quality of their behaviors, suggested that they were actively involved in fulfilling the "role of principal." It seems as though Type Three principal-leaders withdraw from fulfilling the "role of principal" or simply fail to become actively involved in the operation of the school.

Types One and Two were actively involved in operating the school but distinguish from one another in their methods. Type One appeared to be actively involved with teachers; he was inter-personally linked with his faculty. Type Two interacted with the faculty but maintained an inter-personal distance by emphasizing rules and regulations and standard procedures. Type Two's orientation seems to be towards the accomplishment of organizational objectives utilizing the most efficient and direct procedures. He has low tolerance for deviance from efficient procedures or delay in accomplishment of these objectives.

Freedom-Giving Behaviors

All Three Types seem to vary in the amount of "freedom-giving behaviors" they exhibited. Type Three appeared to allow the faculty the most freedom while Type Two allowed the faculty the least freedom. Type One was between Types Two and Three. Inspection of LBDQ-XII items indicated a consistent pattern with Type Three exhibiting the most; Type One, medium; and Type Two, the least amount of Tolerance of Freedom behaviors.

Order Maintaining Behaviors

Inspection of the item descriptions of all Three Types of principal-leaders reveals that each places different emphasis on "order maintaining behaviors." Inspection of the Role Assumption and Initiating Structure behaviors of each Type reveals that Type Two places heavy emphasis upon directing the operations of the school and maintaining definite standards of performance, whereas Type Three places relatively little emphasis on directing the operations of the school. Type One once again displays a pattern which suggests a compromise between the extremes which Types Two and Three represent.

In summary, Type One appears to be a "potent" principal-leader who maintains a balance between "freedom for teachers" and "order for the system" and does it with teachers. Type Two appears to be a "potent" principal-leader who maximizes "order in the system" and minimizes "freedom for teachers" and does it by directives. Type Three appears to be a relatively less "potent" principal-leader who allows maximum freedom for teachers and provides relatively little order for the system and does it by abstention.

These findings are quite similar to Brown's (1967) factor analysis of LBDQ-XII subscales in which he found two general factors subsequently named "Person" and "System" oriented behaviors.

The analysis of the organizational behavior of teachers under Types of

principal-leaders indicated significant differences which appear to follow a consistent pattern and suggest the following theoretical explanations.

Parsons (From Devereux, 1961, pp. 56-57) has defined four problems which provide a framework for conceptualizing the interrelationships between subsystems in a social system. He has defined the system in terms of imperatives which must be functionally related in order for the system to remain in a state of equilibrium. Two of the imperatives, Goal Attainment and Adaptation, are external to the system (school) and although they impinge upon the two internal imperatives they will not be considered here.

The two functional imperatives of particular interest are (a) Pattern Maintenance-Tension Management (Internal-Means) and (b) Integration (Internal-Ends). Devereux (1961, p. 57) has defined these imperatives and they are cited for clarity:

Pattern Maintenance-Tension Management:

1. Pattern Maintenance is the problem "... faced by an actor in reconciling the various norms and demands imposed by his participation in any particular social system with those of other systems."

2. Tension Management "is defined as the problem of maintaining within the unit a level of motivational commitment sufficient for required role performances."

Integration: "... the focus here is upon the relations of units in the system to one another, and the problem that of establishing and maintaining a level of solidarity or cohesion among them sufficient to permit the system to function."

If the Esprit and Disengagement OCDQ-subtests can be theoretically regarded as measures of "Integration," it would appear that under Type One principal-leaders, cohesion (High Esprit) and solidarity (Low Disengagement) are greater. Hindrance and Intimacy could also be interpreted as dimensions of relationships between principal-and-teachers and teacher-and-teacher, respectively, and therefore measures of "Integration."

It is suggested that resolution of the Pattern Maintenance-Tension Management functional imperative is a necessary antecedent of Integration. It is further suggested that under Types Two and Three principal-leaders resolution of this imperative has not reached the level of resolution present under Type One principal-leaders; therefore the weaker states of Integration.

The congruence between principal and teachers was greatest under Type One principal-leaders. It is suggested that this represents a reciprocity of perceptions, between teachers and principal which enhances the stability of their relationships by resolving one Pattern Maintenance Imperative and consequently leads to greater Integration.

These findings and interpretations are consistent with respect to other organizational theories suggested by (a) Getzels and Guba - Nomothetic, Idiographic and Transactional leaders, and (b) Argyris and Bakke's - "Fusion Theory" of organizational effectiveness.

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APPENDIX

TABLE 1

TEN FACTOR SOLUTION - UNROTATED FACTOR MATRIX - PRINCIPAL COMPONENTS

	FACTORS									
	1	2	3	4	5	6	7	8	9	10
Eigenvalues	53.80	8.43	4.55	3.29	2.70	1.94	1.85	1.31	1.22	1.20
% Of Total Variance										
Per Factor	54.35	8.52	4.60	3.32	2.73	1.96	1.88	1.33	1.23	1.22
Cumulative	54.35	62.87	67.47	70.79	73.52	75.49	77.36	78.69	79.93	81.15
% of Common Variance										
Per Factor	66.98	10.50	5.67	4.10	3.37	2.42	2.31	1.64	1.52	1.50
Cumulative	66.98	77.47	83.14	87.24	90.61	93.03	95.34	96.98	98.50	100.00
Number of Variables*- Highest Factor Loading	85	8	5	1	0	0	0	0	0	0

*Number of Variables is Equivalent to the Number of Principals

21

TABLE 2

ITEMS' MEAN AND VARIANCES FOR TYPES OF PRINCIPAL-LEADER

Type	Number	Items' Mean	Variance	Stand. Dev.
1	68	3.7968	.4803	.6930
2	21	3.6341	.3607	.6005
3	10	3.1863	.5167	.7188
Total	99	3.7006	.4926	.7018

TABLE 3

ROTATED PRINCIPAL COMPONENTS FACTOR MATRIX
THREE FACTOR SOLUTION

	Factor Loadings			
School	Type 1	Type 2	Type 3	Communality
1	.394	.778	.013	.760
2	.860	.135	.233	.813
3	.760	.184	.418	.785
4	.257	.720	.100	.595
5	.792	.277	.271	.778
6	.549	.422	.191	.516
7	.435	.381	.191	.371
8	.568	-.187	.573	.685
9	-.007	.309	.496	.342
10	-.178	.831	.034	.723
11	.028	.893	-.162	.824
12	.276	.559	.195	.426
13	.793	.340	.274	.820
14	.222	.781	.151	.682
15	.690	.435	.033	.665
16	.124	.535	.612	.677
17	.836	.195	.230	.790
18	.649	.302	.376	.654
19	.399	.301	.383	.396
20	.753	.156	.292	.676
21	.358	.761	-.104	.718
22	.618	.328	.160	.515
23	.424	-.007	.605	.546
24	.228	.641	.113	.475
25	.749	.046	.401	.723
26	.102	.039	.768	.602
27	.847	.114	.307	.825
28	.570	.400	.262	.553
29	.842	.222	.144	.779
30	.232	.116	.769	.658
31	.715	.318	.432	.799
32	.398	.490	.258	.464
33	.840	.168	.225	.785
34	.818	.342	.129	.803
35	.846	.210	.219	.807
36	.587	.457	.366	.686
37	.903	.222	.126	.880
38	.747	.269	.293	.716
39	.782	.283	.247	.752
40	.377	.524	.442	.612

TABLE 3 (CONT'D.)

School	Factor Loadings			Communality
	Type 1	Type 2	Type 3	
41	.739	.122	.455	.767
42	.868	.137	.194	.810
43	.759	.205	.390	.770
44	.761	.474	.088	.811
45	-.103	.712	-.106	.529
46	.538	.321	.347	.513
47	.405	.727	-.082	.699
48	.571	.166	.507	.611
49	-.178	.808	.084	.691
50	.744	.448	.027	.755
51	.651	.332	.177	.565
52	.781	.432	.063	.801
53	.758	.441	.017	.770
54	.852	.258	.206	.835
55	.708	.040	.537	.791
56	.510	.359	.454	.595
57	.795	.304	.253	.789
58	.462	.518	.332	.591
59	.893	.292	.043	.884
60	.809	.279	.298	.821
61	.564	.309	.144	.434
62	.659	.430	.132	.637
63	.862	.169	.252	.835
64	.604	.044	.372	.505
65	.767	.445	.164	.813
66	.771	.152	.194	.656
67	.919	-.000	.115	.858
68	.350	.506	.197	.417
69	.276	.761	.139	.676
70	.104	.021	.673	.464
71	.204	.453	.413	.418
72	.646	.328	.403	.687
73	.686	.078	.394	.632
74	.453	-.305	.574	.627
75	.360	.525	.149	.428
76	.457	.221	.417	.432
77	.230	.274	.525	.404
78	.888	.074	.220	.843
79	.603	.349	.152	.509
80	.877	.143	.185	.825
81	.489	.425	.427	.602
82	.635	.250	.410	.633
83	.552	.619	.097	.698

TABLE 3 (CONT'D.)

School	Factor Loadings			
	Type 1	Type 2	Type 3	Communality
84	.637	.048	.478	.636
85	.483	.416	.060	.410
86	.814	.064	.310	.763
87	.829	.048	.116	.704
88	.045	-.071	.708	.508
89	.771	.467	.106	.823
90	.727	.359	.203	.698
91	.893	.087	.242	.864
92	.768	.317	.345	.809
93	.825	.253	.227	.796
94	.792	-.011	.436	.817
95	.822	.180	.315	.808
96	.420	.575	.332	.617
97	.848	.317	.084	.826
98	.926	.155	.146	.902
99	.535	.559	.296	.687

% of Total Variance	Per Factor	41.1	15.6	10.7
	Cumulative	41.1	56.7	67.4
% of Common Variance	Per Factor	60.9	23.2	15.9
	Cumulative	60.9	84.1	100.0

TABLE 4

ITEM DESCRIPTIONS - TYPAL ARRAY Z'S

Item	Description	Z-Scores by Types 1	2	3
1.	He acts as the spokesman of the faculty. (Reps.)	0.3	1.4	1.0
2.	He waits patiently for the results of a decision. (Tol. Uncer.)	0.7	-0.3	0.7
3.	He makes pep talks to stimulate the faculty. (Pers.)	-1.3	-0.6	-0.9
4.	He lets teachers know what is expected of them. (Struct.)	-0.0	1.2	-0.8
5.	He allows the teachers complete freedom in their work. (Tol. Freed.)	1.0	- 0.7	2.5
6.	He is hesitant about taking initiative with the faculty.* (Role Assum.)	0.0	0.9	-1.3
7.	He is friendly and approachable. (Cons.)	1.4	0.6	2.2
8.	He encourages after-school work by teachers. (Prod. Emph.)	-2.2	-0.2	-0.6
9.	He makes accurate decisions. (Pred. Acc.)	0.7	0.7	0.2
10.	He gets along well with the people above him. (Sup. Orien.)	1.1	1.4	1.5
11.	He publicizes the activities of the faculty. (Reps.)	-0.8	0.2	0.0
12.	He becomes anxious when he cannot find out what is coming next.* (Tol. Uncer.)	-0.1	-1.9	-0.7
13.	His arguments are convincing. (Pers.)	0.3	-0.1	-0.6
14.	He encourages the use of uniform procedures. (Struct.)	-0.7	0.8	-0.0
15.	He permits the teachers to use their own judgment in solving problems. (Tol Freed.)	1.0	-0.2	1.8
16.	He fails to take necessary action.* (Role Assum.)	0.5	0.7	-1.3
17.	He does little things to make it pleasant to be a			

TABLE 4 (CONT'D.)

Item	Description	Z-Scores Types 1	2	3
	member of the faculty. (Cons.)	0.7	-0.7	-0.6
18.	He stresses being ahead of competing schools. (Prod. Emph.)	-3.3	-2.1	-1.6
19.	He keeps the faculty working together as a team. (Integ.)	0.6	-0.1	-0.6
20.	He keeps the faculty in good standing with higher authority. (Sup. Orien.)	0.9	1.1	0.8
21.	He speaks as the representative of the faculty. (Reps.)	0.4	1.1	0.8
22.	He accepts defeat in stride. (Tol. Uncer.)	-0.1	-1.7	0.3
23.	He argues persuasively for his point of view. (Pers.)	-0.5	0.4	-0.1
24.	He tries out his ideas with the faculty. (Struct.)	-0.0	0.4	0.2
25.	He encourages initiative in the teachers. (Tol. Freed.)	1.1	0.6	1.7
26.	He lets other persons take away his leadership in the faculty.* (Role Assum.)	0.7	1.5	-0.3
27.	He puts suggestions made by the faculty into operation. (Cons.)	0.2	-0.7	0.1
28.	He needles teachers for greater effort. (Prod. Emph.)	-3.9	-1.8	-2.1
29.	He seems able to predict what is coming next. (Pred. Acc.)	-0.2	-0.5	-0.9
30.	He is working hard for a promotion. (Sup. Orien.)	-2.7	-2.4	-0.9
31.	He speaks for the faculty when visitors are present. (Reps.)	-0.2	1.0	1.1
32.	He accepts delays without becoming upset. (Tol. Uncer.)	0.1	-1.9	0.5
33.	He is a very persuasive talker. (Pers.)	-0.2	0.3	-0.8
34.	He makes his attitudes clear to the faculty. (Struct.)	0.4	1.5	0.0
35.	He lets the teachers do their work the way they think best. (Tol. Freed.)	1.0	-0.6	2.2

TABLE 4 (CONT'D.)

Item	Description	Z-Scores Types 1	2	3
36.	He lets some teachers take advantage of him.* (Role Assum.)	0.4	0.8	-0.8
37.	He treats all teachers as his equals. (Cons.)	0.6	-1.3	0.1
38.	He keeps the work moving at a rapid pace. (Prod. Emph.)	-0.2	0.5	-0.2
39.	He settles conflicts when they occur in the faculty. (Integ.)	-0.9	-1.1	-1.0
40.	His suggestions are acted favorably upon by his supervisors. (Sup. Orien.)	0.1	0.1	-0.4
41.	He represents the faculty at outside meetings. (Reps.)	0.3	0.6	1.3
42.	He becomes anxious when waiting for new developments.* Tol. Uncer.)	-0.5	-2.1	-0.5
43.	He is very skillful in an argument. (Pers.)	-0.2	-0.1	-0.9
44.	He decides what shall be done and how it shall be done. (Struct.)	-0.9	0.9	-0.2
45.	He assigns a task, then lets the teachers handle it. (Tol. Freed.)	0.1	-0.1	1.5
46.	He is the leader of the faculty in name only.* (Role Assum.)	0.8	1.4	-1.0
47.	He gives advance notice of changes. (Cons.)	0.4	0.1	-0.3
48.	He pushes for increased production. (Prod. Emph.)	-1.6	-0.0	-0.8
49.	Things usually turn out as he predicts. (Pred. Acc.)	-0.1	-0.3	-0.3
50.	He enjoys the privileges of his position. (Sup. Orien.)	-0.9	0.7	1.4
51.	He handles complex problems efficiently. (Recon.)	0.7	0.7	-0.5
52.	He is able to tolerate postponement and uncertainty. (Tol. Uncer.)	-0.2	-1.8	0.4
53.	He is not a very convincing talker.* (Pers.)	0.5	0.5	-0.4
54.	He assigns teachers to particular tasks. (Struct.)	-0.4	0.9	1.0

TABLE 4 (CONT'D.)

Item	Description	Z-Scores Types 1	2	3
55.	He turns the teachers loose on a job and lets them go to it. (Tol. Freed.)	-0.4	-0.8	1.0
56.	He backs down when he ought to stand firm.* (Role Assum.)	0.6	1.1	-1.2
57.	He keeps to himself.* (Cons.)	0.4	-0.0	0.9
58.	He asks the teachers to work harder. (Prod. Emph.)	-3.2	-1.5	-1.4
59.	He is accurate in predicting the trend of events. (Pred. Acc.)	-0.2	-0.2	-0.6
60.	He gets his superiors to act for the welfare of the teachers. (Sup. Orien.)	-0.1	-0.2	-0.7
61.	He gets swamped by details.* (Recon.)	0.2	-1.3	-0.4
62.	He can wait just so long, then blows up.* (Tol. Uncer.)	1.2	-0.5	1.5
63.	He speaks from a strong inner conviction. (Pers.)	0.3	0.6	-0.2
64.	He makes sure that his part in the school is understood by the teachers. (Struct.)	-0.3	1.2	-0.8
65.	He is reluctant to allow the teachers any freedom of action.* (Tol. Freed.)	1.2	-0.7	1.9
66.	He lets some teachers have authority that he should keep.* (Role Assum.)	0.9	1.0	-0.4
67.	He looks out for the personal welfare of teachers. (Cons.)	0.9	0.2	0.4
68.	He permits the teachers to take it easy in their work.* (Prod. Emph.)	-0.3	1.1	0.3
69.	He sees to it that the work of the faculty is coordinated. (Integ.)	0.4	0.0	-0.6
70.	His word carries weight with his superiors. (Sup. Orien.)	0.3	0.4	-0.2
71.	He gets things all tangled up.* (Recon.)	1.5	1.0	0.7
72.	He remains calm when uncertain about coming events. (Tol. Uncer.)	0.5	-1.0	0.5

TABLE 4 (CONT'D.)

Item	Description	Z-Scores Types 1	2	3
73.	He is an inspiring talker. (Pers.)	-0.2	-0.8	-1.8
74.	He schedules the work to be done. (Struct.)	-0.3	0.6	-0.4
75.	He allows the faculty a high degree of initiative. (Tol. Freed.)	1.0	-0.5	1.4
76.	He takes full charge when emergencies arise. (Role Assum.)	0.9	1.2	0.8
77.	He is willing to make changes. (Cons.)	0.8	-0.1	1.5
78.	He drives hard when there is a job to be done. (Prod. Emph.)	0.0	1.5	0.6
79.	He helps teachers settle their differences. (Integ.)	-0.9	-1.3	-1.1
80.	He gets what he asks for from his superiors. (Sup. Orien.)	-0.2	0.1	-0.2
81.	He can reduce a madhouse to system and order. (Recon.)	0.1	0.2	-1.1
82.	He is able to delay action until the proper time occurs. (Tol. Uncer.)	0.3	-0.1	-0.4
83.	He persuades others that his ideas are to their advantage. (Pers.)	-0.6	-0.1	-0.4
84.	He maintains definite standards of performance. (Struct.)	0.4	1.1	-0.2
85.	He trusts the teachers to exercise good judgment. (Tol. Freed.)	1.3	0.5	2.2
86.	He overcomes attempts made to challenge his leadership. (Role Assum.)	-0.7	0.1	-0.3
87.	He refuses to explain his actions.* (Cons.)	0.9	-0.2	1.0
88.	He urges the faculty to beat its previous records. (Prod. Emph.)	-2.7	-1.4	-1.5
89.	He anticipates problems and plans for them. (Pred. Acc.)	0.0	-0.1	-0.8
90.	He is working his way to the top. (Sup. Orien.)	-1.9	-1.5	-1.2

30

TABLE 4 (CONT'D.)

Item	Description	Z-Scores Types 1	2	3
91.	He gets confused when too many demands are made of him.* (Recon.)	0.7	0.1	-0.0
92.	He worries about the outcome of any new procedure.* (Tol. Uncer.)	-0.2	-1.4	-0.1
93.	He can inspire enthusiasm for a project. (Pers.)	0.3	0.0	-1.0
94.	He asks that teachers follow standard rules and regulations. (Struct.)	0.1	1.7	0.3
95.	He permits the faculty to set its own pace. (Tol. Freed.)	-0.2	-1.6	1.1
96.	He is easily recognized as the leader of the faculty. (Role Assum.)	0.9	1.6	-0.7
97.	He acts without consulting the faculty.* (Cons.)	-0.2	-1.7	-0.7
98.	He keeps the faculty working up to capacity. (Prod. Emph.)	0.3	0.9	0.0
99.	He maintains a closely knit faculty. (Integ.)	0.4	-0.4	-1.2
100.	He maintains cordial relations with superiors. (Sup. Orien.)	1.0	1.4	1.2

*Negatively Scored Item

TABLE 5

ITEMS DESCRIBING TYPE 1 (TOLERANT-INTEGRATOR) LEADER AS COMPARED TO ALL OTHER TYPES

Item No.	Item	Type 1 Z-Score	Average Z-Score	Difference
	(TYPE 1 ITEMS GREATER THAN ALL OTHERS)			
17.	He does little things to make it pleasant to be a member of the faculty. (Cons.)	0.676	-0.621	1.296
37.	He treats all teachers as his equals. (Cons.)	0.634	-0.589	1.223
99.	He maintains a closely knit faculty. (Integ.)	0.410	-0.802	1.213
12.	He becomes anxious when he cannot find out what is coming next.* (Tol. Uncer.)	-0.147	-1.277	1.130
73.	He is an inspiring talker. (Pers.)	-0.218	-1.298	1.079
97.	He acts without consulting the faculty.* (Cons.)	-0.192	-1.211	1.019
61.	He gets swamped by details.* (Recon.)	0.206	-0.811	1.017
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	(TYPE 1 ITEMS LESS THAN ALL OTHERS)			
78.	He drives hard when there is a job to be done. (Prod. Emph.)	0.020	1.028	-1.008
30.	He is working hard for a promotion. (Sup. Orien.)	-2.743	-1.629	-1.114
14.	He encourages the use of uniform procedures. (Struct.)	-0.744	0.401	-1.145

TABLE 5 (CONT'D.)

Item No.	Item	Type 1 Z-Score	Average Z-Score	Difference
48.	He pushes for increased production. (Prod. Emph.)	-1.628	-0.385	-1.243
88.	He urges the faculty to beat its previous records. (Prod. Emph.)	-2.693	-1.446	-1.248
44.	He decides what shall be done and how it shall be done. (Struct.)	-0.882	0.377	-1.259
31.	He speaks for the faculty when visitors are present. (Reps.)	-0.227	1.079	-1.306
54.	He assigns teachers to particular tasks. (Struct.)	-0.395	0.937	-1.332
18.	He stresses being ahead of competing schools. (Prod. Emph.)	-3.301	-1.891	-1.410
58.	He asks the teachers to work harder. (Prod. Emph.)	-3.187	-1.461	-1.727
8.	He encourages after-school work by teachers. (Prod. Emph.)	-2.169	-0.392	-1.776
50.	He enjoys the privileges of his position. (Sup. Orien.)	-0.858	1.053	-1.911
28.	He needles teachers for greater effort. (Prod. Emph.)	-3.938	-1.945	-1.993

*Negatively Scored Item

TABLE 6

ITEMS DESCRIBING TYPE 2 (INTOLERANT-STRUCTURALIST) LEADER AS COMPARED TO ALL OTHER TYPES

Item No.	Item	Type 2 Z-Score	Average Z-Score	Difference
	(TYPE 2 ITEMS GREATER THAN ALL OTHERS)			
64.	He makes sure that his part in the school is understood by the teachers. (Struct.)	1.178	-0.515	1.693
4.	He lets teachers know what is expected of them. (Struct.)	1.217	-0.436	1.653
6.	He is hesitant about taking initiative with the faculty.* (Role Assum.)	0.941	-0.634	1.575
96.	He is easily recognized as the leader of the faculty. (Role Assum.)	1.625	0.073	1.552
46.	He is the leader of the faculty in name only.* (Role Assum.)	1.381	-0.115	1.496
94.	He asks that teachers follow standard rules and regulations. (Struct.)	1.654	0.211	1.443
44.	He decides what shall be done and how it shall be done. (Struct.)	0.914	-0.522	1.436
56.	He backs down when he ought to stand firm.* (Role Assum.)	1.057	-0.300	1.357
26.	He lets other persons take away his leadership in the faculty.* (Role Assum.)	1.520	0.227	1.292
34.	He makes his attitudes clear to the faculty. (Struct.)	1.503	0.224	1.279
14.	He encourages the use of uniform procedures. (Struct.)	0.843	-0.392	1.236
28.	He needles teachers for greater effort. (Prod. Emph.)	-1.803	-3.013	1.210

TABLE 6 (CONT'D.)

Item No.	Item	Type 2 Z-Score	Average Z-Score	Difference
8.	He encourages after-school work by teachers. (Prod. Emph.)	-0.199	-1.377	1.178
48.	He pushes for increased production. (Prod. Emph.)	-0.015	-1.192	1.176
78.	He drives hard when there is a job to be done. (Prod. Emph.)	1.458	0.309	1.150
16.	He fails to take necessary action.* (Role Assum.)	0.686	-0.379	1.065
68.	He permits the teachers to take it easy in their work.*	1.075	0.011	1.064

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(TYPE 2 ITEMS LESS THAN ALL OTHERS)

2.	He waits patiently for the results of a decision. (Tol. Uncer.)	-0.293	0.707	-1.000
87.	He refuses to explain his actions.* (Cons.)	-0.168	0.955	-1.123
55.	He turns the teachers loose on a job, and lets them go to it. (Tol. Freed.)	-0.834	0.338	-1.172
7.	He is friendly and approachable. (Cons.)	0.633	1.816	-1.183
61.	He gets swamped by details.* (Recon.)	-1.265	-0.075	-1.190
85.	He trusts the teachers to exercise good judgment. (Tol. Freed.)	0.487	1.729	-1.242
97.	He acts without consulting the faculty.* (Cons.)	-1.706	-0.454	-1.252
77.	He is willing to make changes. (Cons.)	-0.091	1.164	-1.255
92.	He worries about the outcome of any new procedure.* (Tol. Uncer.)	-1.434	-0.137	-1.297

TABLE 6 (CONT'D.)

Item No.	Item	Type 2 Z-Score	Average Z-Score	Difference
12.	He becomes anxious when he cannot find out what is coming next.* (Tol. Uncer.)	-1.878	-0.411	-1.467
72.	He remains calm when uncertain about coming events. (Tol. Uncer.)	-1.025	0.478	-1.503
15.	He permits the teachers to use their own judgment in solving problems. (Tol. Freed.)	-0.170	1.362	-1.532
42.	He becomes anxious when waiting for new developments.* (Tol. Uncer.)	-2.058	-0.517	-1.541
37.	He treats all teachers as his equals. (Cons.)	-1.304	0.380	-1.683
22.	He accepts defeat in stride. (Tol. Uncer.)	-1.654	0.088	-1.742
75.	He allows the faculty a high degree of initiative. (Tol. Freed.)	-0.526	1.234	-1.759
62.	He can wait just so long, then blows up.* (Tol. Uncer.)	-0.528	1.338	-1.866
52.	He is able to tolerate postponement and uncertainty. (Tol. Uncer.)	-1.820	0.138	-1.958
95.	He permits the faculty to set its own pace. (Tol. Freed.)	-1.650	0.473	-2.123
35.	He lets the teachers do their work the way they think best. (Tol. Freed.)	-0.558	1.583	-2.141
32.	He accepts delays without becoming upset. (Tol. Uncer.)	-1.862	0.319	-2.181
65.	He is reluctant to allow the teachers any freedom of action.* (To. Freed.)	-0.673	1.573	-2.246
5.	He allows the teachers complete freedom in their work. (Tol. Freed.)	-0.739	1.738	-2.477

*Negatively Scored Item

36

TABLE 7

ITEMS DESCRIBING TYPE 3 (TOLERANT-INTERLOPER) LEADER AS COMPARED TO ALL OTHER TYPES

Item No.	Item	Type 3 Z-Score	Average Z-Score	Difference
	(TYPE 3 ITEMS GREATER THAN ALL OTHERS)			
5.	He allows the teachers complete freedom in their work. (Tol. Freed.)	2.495	0.121	2.374
95.	He permits the faculty to set its own pace. (Tol. Freed.)	1.135	-0.919	2.054
35.	He lets the teachers do their work the way they think best. (Tol. Freed.)	2.164	0.221	1.943
30.	He is working hard for a promotion. (Sup. Orien.)	-0.895	-2.553	1.657
65.	He is reluctant to allow the teachers any freedom of action.* (Tol. Freed.)	1.926	0.274	1.652
55.	He turns the teachers loose on a job, and lets them go to it. (Tol. Freed.)	1.048	-0.603	1.651
45.	He assigns a task, then lets the teachers handle it. (Tol. Freed.)	1.548	-0.009	1.557
52.	He is able to tolerate postponement and uncertainty. (Tol. Uncer.)	0.436	-0.990	1.425
32.	He accepts delays without becoming upset. (Tol. Uncer.)	0.541	-0.883	1.424
50.	He enjoys the privileges of his position. (Sup. Orien.)	1.364	-0.058	1.421
15.	He permits the teachers to use their own judgment in solving problems. (Tol. Freed.)	1.754	0.400	1.354
85.	He trusts the teachers to exercise good judgment. (Tol. Freed.)	2.199	0.873	1.326
75.	He allows the faculty a high degree of initiative. (Tol. Freed.)	1.441	0.250	1.191

37

TABLE 7 (CONT'D.)

Item No.	Item	Type 3 Z-Score	Average Z-Score	Difference
7.	He is friendly and approachable. (Cons.)	2.208	1.028	1.180
22.	He accepts defeat in stride. (Tol. Uncer.)	0.290	-0.884	1.174
77.	He is willing to make changes. (Cons.)	1.509	0.365	1.144
62.	He can wait just so long, then blows up.* (Tol. Uncer.)	1.451	0.349	1.103
18.	He stresses being ahead of competing schools. (Prod. Emph.)	-1.645	-2.719	1.074

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(TYPE 3 ITEMS LESS THAN ALL OTHERS)

93.	He can inspire enthusiasm for a project. (Pers.)	-1.000	0.131	-1.131
51.	He handles complex problems efficiently. (Recon.)	-0.468	0.700	-1.168
81.	He can reduce a madhouse to system and order. (Recon.)	-1.074	0.145	-1.220
99.	He maintains a closely knit faculty. (Integ.)	-1.211	0.009	-1.220
64.	He makes sure that his part in the school is understood by the teachers. (Struct.)	-0.776	0.462	-1.238
73.	He is an inspiring talker. (Pers.)	-1.765	-0.524	-1.241
66.	He lets some teachers have authority that he should keep.* (Role Assum.)	-0.434	0.923	-1.356
36.	He lets some teachers take advantage of him.* (Role Assum.)	-0.796	0.585	-1.381
26.	He lets other persons take away his leadership in the faculty.* (Role Assum.)	-0.267	1.121	-1.388

TABLE 7 (CONT'D.)

Item No.	Item	Type 3 Z-Score	Average Z-Score	Difference
4.	He lets teachers know what is expected of them. (Struct.)	-0.830	0.588	-1.418
6.	He is hesitant about taking initiative with the faculty.* (Role Assum.)	-1.302	0.487	-1.790
16.	He fails to take necessary action.* (Role Assum.)	-1.279	0.604	-1.883
96.	He is easily recognized as the leader of the faculty. (Role Assum.)	-0.718	1.244	-1.962
56.	He backs down when he ought to stand firm.* (Role Assum.)	-1.240	0.848	-2.088
46.	He is the leader of the faculty in name only.* (Role Assum.)	-1.016	1.083	-2.099

*Negatively Scored Item

39

TABLE 8

GROUPS-WITHIN-TREATMENTS ANOVA
DISENGAGEMENT OF TEACHERS UNDER TYPES OF LEADERS

ANOVA SUMMARY

	DF	SS	MS	F
Between Types	2	.4518	.2258	6.4743*
Within Types	67	2.3377	.0348	
TOTAL	69	2.7895	.0404	

*Significant at $\alpha = .05$ R:F $\geq$ 3.14

CELL SUMMARY

Types	n	Mean	Variance	Stand. Dev.
1	51	1.4307	.0250	.1581
2	12	1.5621	.0537	.2317
3	7	1.6680	.0597	.2444

TABLE OF DIFFERENCES BETWEEN ALL POSSIBLE PAIRS OF MEANS

	Type - 1	Type - 2	Type - 3
Type - 1		.1314	.2373**
Type - 2			.1059
Type - 3			

**Significant at $\alpha = .05$ SCHEFFÉ TEST

TABLE 9

GROUPS-WITHIN-TREATMENTS ANOVA
HINDRANCE UNDER TYPES OF LEADERS

ANOVA SUMMARY

	DF	SS	MS	F
Between Types	2	2.4119	1.2060	20.0418*
Within Types	67	4.0315	.0602	
TOTAL	69	6.4434	.0934	

*Significant at $\alpha = .05$ R:F $\geq$ 3.14

CELL SUMMARY

Types	n	Mean	Variance	Stand. Dev.
1	51	1.838	.052	.227
2	12	2.257	.085	.292
3	7	2.253	.055	.234

TABLE OF DIFFERENCES BETWEEN ALL POSSIBLE
PAIRS OF MEANS

	Type - 1	Type - 3	Type - 2
Type - 1		.415**	.419**
Type - 3			.004
Type - 2			

**Significant at $\alpha = .05$ SCHEFFÉ TEST

TABLE 10

GROUPS-WITHIN-TREATMENTS ANOVA
ESPRIT OF TEACHERS UNDER TYPES OF LEADERS

ANOVA SUMMARY

	DF	SS	MS	F
Between Types	2	1.1708	0.5854	11.1299*
Within Types	67	3.5241	0.0526	
TOTAL	69	4.6949	0.680	

*Significant at $\alpha = .05$ R:F $\geq$ 3.14

CELL SUMMARY

Types	n	Mean	Variance	Stand. Dev.
1	51	3.1903	.0498	.2232
2	12	2.9344	.0665	.2579
3	7	2.8502	.0263	.1622

TABLE OF DIFFERENCES BETWEEN ALL POSSIBLE PAIRS OF MEANS

	Type - 3	Type - 2	Type - 1
Type - 3		.0842	.3401**
Type - 2			.2559**
Type - 1			

**Significant at $\alpha = .05$ SCHEFFÉ TEST

TABLE 11

GROUPS-WITHIN-TREATMENTS ANOVA
INTIMACY OF TEACHERS UNDER TYPES OF LEADERS

ANOVA SUMMARY

	DF	SS	MS	F
Between Types	2	.4509	.2255	3.7267*
Within Types	67	4.0533	.0605	
TOTAL	69	4.5042	.0653	

*Significant at $\alpha = .05$ R:F $\geq$ 3.14

CELL SUMMARY

Types	n	Mean	Variance	Stand. Dev.
1	51	2.315	.058	.242
2	12	2.124	.051	.225
3	7	2.402	.066	.257

TABLE OF DIFFERENCES BETWEEN ALL POSSIBLE PAIRS OF MEANS

	Type - 2	Type - 1	Type - 3
Type - 2		.191	.278
Type - 1			.087
Type - 3			

**Significant at $\alpha = .05$ SCHEFFÉ TEST

TABLE 12

GROUPS-WITHIN-TREATMENTS ANOVA
SIZE OF STAFF UNDER TYPES OF LEADERS

ANOVA SUMMARY

	DF	SS	MS	F
Between Types	2	95.0655	47.5328	1.6328
Within Types	67	1950.4202	29.1107	
TOTAL	69	2045.4857	29.6447	

*Significant at $\alpha = .05$ R:F $\geq$ 3.14

CELL SUMMARY

Types	n	Mean	Variance	Stand. Dev.
1	51	16.804	32.864	5.733
2	12	19.333	10.889	3.300
3	7	19.571	20.531	4.531

TABLE 13

GROUPS-WITHIN-TREATMENTS ANOVA
CONGRUENCE OF LEADERSHIP BEHAVIOR UNDER TYPES OF LEADERS

ANOVA SUMMARY

	DF	SS	MS	F
Between Types	2	8.7937	4.3968	12.7155*
Within Types	66	22.8217	.3458	
TOTAL	68	31.6154	.4649	

*Significant at $\alpha = .05$ R:F $\geq$ 3.14

CELL SUMMARY

Types	n	Mean	Variance	Stand. Dev.
1	50	1.8219	.2772	.5265
2	12	2.5976	.5156	.7181
3	7	2.6592	.3963	.6295

TABLE OF DIFFERENCES BETWEEN ALL POSSIBLE PAIRS OF MEANS

	Type - 1	Type - 2	Type - 3
Type - 1		.7757**	.8373**
Type - 2			.0616
Type - 3			

**Significant at $\alpha = .05$ SCHEFFÉ TEST

TABLE I4

DETERMINATION OF THE POPULATION AND SELECTION OF THE SAMPLE

School District	Number of Elementary Schools in District	Number Meeting Inclusion Criteria	Number Selected
Des Moines	60	47	26
Cedar Rapids	30	20	15
Davenport*	22	16	16
Waterloo	29	12	5
Sioux City*	29	19	12
Council Bluffs	19	17	12
Dubuque	13	8	4
Iowa City	14	9	4
Ottumwa	9	9	7
Fort Dodge	15	8	4
Burlington	11	8	7
Mason City	11	8	5
Cedar Falls	7	7	6
Clinton	8	6	4
Muscatine	6	6	4
Marshalltown	6	5	5
Ames	7	6	3
West Des Moines	10	7	4
Bettendorf	4	2	1
Newton*	8	8	6
TOTAL	318	228	150

*Central Office Requested To Be Excluded From The Study

TABLE 15

PRINCIPAL AND TEACHER RETURNS FROM SAMPLE - REPORTED BY DISTRICT

School District	No. of Schools	Usable Principal Returns	Teacher - Returns No. Sent	No. Returned	No. Usable	Schools Included In Data Analysis
Des Moines	23*	22	270	175	167	21
Cedar Rapids	15	15	173	129	122	14
Waterloo	5	5	55	38	37	4
Council Bluffs	12	12	133	102	96	10
Dubuque	4	2	46	20	14	1
Iowa City	4	4	40	27	26	3
Ottumwa	7	5	81	53	49	6
Fort Dodge	4	4	41	31	31	4
Burlington	7	7	78	54	51	6
Mason City	5	5	53	34	33	4
Cedar Falls	6	4	68	35	31	5
Clinton	4	4	43	26	24	4
Muscatine	4	4	41	33	31	4
Marshalltown	5	5	58	42	41	5
Ames	3	3	33	25	24	3
West Des Moines	4	4	48	43	43	4
Bettendorf	1	1	11	9	9	1
TOTAL	113	106	1272	876	829	99
PERCENTAGE		93.5		68.8	65.0	87.6

*Three Principals Requested To Be Excluded From The Study

47